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ABSTRACT

The new approach to library services in the two-year college, called the "learning resource program," focuses on the improvement and self-discovery of the individual student. Learning resource programs must be selective and discretionary about the type and amount of hardware and software available for learning activities. The learning resource programs contain many of the fundamental services that enhance learning, along with newer media and information retrieval that assist in implementing the philosophy and programs of the individual two-year college. The nature of the learning resource program insures and accounts for flexibility. Traditionally, educators have always controlled student academic behavior, but today researchers are encouraging librarians and faculty to merge, thereby sharing and equalizing their roles. Learning resource programs operate most effectively if they maintain the characteristics of adaptability, flexibility, and implementation. Realistically, however, since two-year institutions have proportionately smaller enrollments, it is difficult for them to build up substantial acquisitions. As compensation for this, it is suggested that two-year institutions develop cooperative arrangements with neighboring libraries, colleges, and communities. Since learning resource programs reflect curriculum and curriculum reflects students' needs, the amounts and types of technology used are predicted to grow in the future. (An annotated bibliography of 70 entries is provided, as is a list of organizations that responded to letters of inquiry.) (DB)

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Learning Resource Programs for Two-Year Colleges:

A State of the Art

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Spring, 1973

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Developmental History

The community college is the newest edition to the educational establishment. In its second half century, it is America's original contribution to educational, philosophical thinking. (11:3) The learning resource center is a concept that has grown out of the generally established library system and through the development of the two-year college. "As a system, community college libraries reflect many characteristics of other library systems, yet the emphases, the demands and the scope are sufficiently different that they require new approaches and new professional orientation." (21:30) Until only recently the identity of the two-year college has been in a state of limbo. In many instances these institutions were seen as an upward extension of the high school or as lower division college. During the 1880's a Greeley, Colorado high school extended their program into the thirteenth grade. By 1900, the University of Chicago began awarding the Associate of Arts degree to students in their junior program of studies. (21:31-32)

From this beginning post-secondary education programs relied on the library system available. Whether the libraries existed on the college campus or in the high school building, it has been traditional that within education the library has functioned primarily as a book depository. "This at least, has been the case up through the early nineteenth century." (34:1) Two traditional and basic characteristics, then, intended that libraries (1) store

information and (2) that the information be almost exclusively print-oriented.

Dramatic historical events have taken place that have changed the face of society and the role of the traditional library in society along with it. "If educators believe the theorists who state that an educational system is a reflection of the society which produced it, then they [must] admit that they could not educate in the mid-twentieth century in the same manner it had been doing in pre-war days." (29:2) In the decades prior to World War II library services and audiovisual services remained separate entities; simply there were "print" and "non-print" materials and the former were found in the library. Following World War II highly developed technological means of communication became the necessary accoutrements of the American life-style. The incorporation of language laboratories, study skill centers, dial access system and the like have altered not only the appearance of the library, but its fundamental purpose of being.

> Recently we have begun to attach words and phrases to the library which indicate a function well beyond what the early visionaries forsaw as the future of the cloistered book depository. Words such as library "complex," phrases such as "Learning Resource Center," Learning Materials Center," "Instructional Media Center," and others clearly imply an extension of the library as a source of...learning materials. (34:1)

The American Library Association, the American Association of Community and Junior Colleges and the Association for Educational Communications and Technology refer to this evolving, all-encompassing concept as the "Learning Resource Program." (63:n.pag.)

Established in 1901 Joliet Junior College is the oldest two-year college functioning today. From the beginning of its establishment until only ten years ago, this college shared facilities jointly with the local Joliet, Illinois high school. (21:31) It opened its doors under an agreement with the University of Chicago, which undertook to accept two years of work accomplished by students at this extended high school. (7:37) While this proved to be a significant higher educational advancement for providing more accessible opportunities to a body of students, it also paints a picture of library services in the beginning of the movement. In the beginning, the bulk of available resources were gathered from the limited high school library collection, even though the University was granting associate degrees along with the appropriate freshman and sophomore years' curriculum, leading to the baccalaureate degree.

Judging from Ralph E. Ellsworth's description, library services in the first half of the century were far from commendable, lacking the kind of human scale twentieth-century students like when they read.

> [Libraries] could not provide small conference and discussion rooms adjacent to the reading rooms. They straight-jacketed the kind of service librarians could give and thus affected the kind of relationship students and librarians could have. They provided no places where students and faculty could meet in an easy, natural relationship near books. They were cold and formal and lacking in gracefulness. They were gray in color and tone. (32:82)

The sorry conditions of library systems in the country did not go unnoticed. In 1939 B. Lamar Johnson presented his study of the Stephens College new library program in Vitalizing A College Library. This effort proved to be a landmark event in determining "the place of the library in schools and colleges." Johnson relates the story of the program's development at Stephens College during the years from 1932 to 1938. It was the program's perspective that was unique and that layed the groundwork for other colleges to follow.

> At all points in the program attention was centered upon the individual student...During the succeeding months the objectives of the proposed library program were formulated as follows: first, to make the library to contribute as effectively as possible to the instructional program of the college; second, to teach students how to use books effectively; and, third, to lead students to love books and to read for pleasure. (9:3-4)

Interestingly, Stephens College, the pioneer institution in changing the traditional patterns of library services, is a junior college. The significance of this publication cannot be maximized. In discussing the role of the junior college library, one leader in the field indicated that no one has spelled out these roles more clearly than B. Lamar Johnson. (49:227)

The role of the library has been formalized and widely accepted as an educational function rather than a custodial service, although the actual application is far from being realized. Technological advancements and the proliferation of knowledge, while mutually dependent upon each other, still exist as two departments of thought. (7:5) In 1923 the Department of Visual Instruction of the National

Education Association was established. The comment was made at the time, "in the minds of many thousands visual education will now cease to be a fad." (42:42) Today, the DVI is known as the Association for Educational Communications and Technology, and the Association is introducing proposals to promote a merger of audiovisual and library services.

> For too long our schools have gone without good libraries, just as they have gone without good audiovisual services. The attention both these services are getting today is justly deserved... The time has never been more propitious for us to remake the educational media field...to offer a combined, comprehensive educational media service that heretofore has been only a dream which we really never believed could be achieved. (12:284-287)

In the early days of their development, the AECT and educational library services progressed simultaneously but independent of each other. Their eventual fusion will come to bear significant impact on learning resource programs. The Associations's role was clearly defined at a 1963 convention, concluding that its members should not consider themselves media specialists. Rather, they are communication specialists, and the entire process--not just the message-media product--is their field of concern. (12:45) (By 1963 37.8 percent of two-year college libraries provided their institutions audio-visual materials and services and the percentage is undoubtedly higher today.) (21:69) This acknowledgment of changing roles will begin to answer to the needs of librarians who now show a growing concern for "nonbook" materials and to audiovisual instruction specialists who see as part of their role a concern for "verbal" as well as "nonverbal" materials. (12:42) Traditionally the library on a college campus has

been passive: it has kept in its place. The library must no longer remain only a storehouse, manned by "academic handymen." Libraries will have to be integrated into the instructional process in such a way as to maximize their usefulness. The professional skills and knowledge of librarians must be used in the total education process. (33:5)

The state of the development of the library has been formalized by Johnson and bolstered by Harvie Branscomb's treatment in Teaching With Books published twenty-five years after Johnson's work in 1965. Johnson offered guidelines that proved effective for Stephens College to the general education public.

> It is clear that Stephens College assumes that learning can be exhilarating and pleasant, and therefore the school emphasizes the importance of the individual student. The implications of this approach for the library are two-fold: (1) the library should reflect the philosophy of education of the institution in its structure and planning. (2) The demarcation line between the librarian as a "keeper of books" and the professor should be modified; rather, the library should gradually assume the functions of both. (33:9-10)

Branscomb considers the extent to which the efforts of the college library are integrated with those of the institution as a whole. Branscomb supports his findings based on the thesis that "the fundamental need of the college library is to develop a distinctive program of its own." (3:1) Like Johnson, Branscomb considers the student as individual; he goes one step further by concentrating heavily on the roles of faculty and librarians. The library should be the students' laboratory, he asserts, and librarians who emphasize processing over service are minimizing their own roles. (49:228) Both Johnson and Branscomb's publications

earmark the trends in this century that diverts education away from old library practices towards the new concepts enveloped in the learning resource program.

What is the state of junior college librarianship? "What happens to academic libraries depends upon what happens in higher education, in communications, and in training for librarianship." (33:5) In January, 1973 the "Guidelines for Two-Year College Learning Resource Programs" was published, and it represents a significant breakthrough: first, through their approach by program and not by facility; and second, through the fact that they are joint guidelines of three concerned organizations--the ALA, the AACJC and the AECT. (63:n.pag.) These guidelines signify a culmination of years of growth. They combine print-oriented and audiovisual materials for programs that endorse innovative leadership, coupled with a multiplicity of resources managed by qualified staff who serve to facilitate the attainment of institutional objectives. (63:n.pag.) As the publication emphasizes, they are working to aid, support and define the program's four-fold role. Briefly, a learning resource program provides leadership and assistance for accomplishing objectives, provides an organized and readily accessible collection of materials and supported equipment, provides a staff involved in serving the needs of student, faculty and community, and encourages innovation, learning, and community service by providing facilities and resources which will make them possible. (63:n.pag.)

The formulation of two-year college library standards has been in the making since 1920 with the organization of the AAJC. In the beginning, guidelines were drawn up according to curricula that usually parelleled that offered in senior colleges and universities in the freshman and sophomore years. But even in the beginning, there were members that advocated more contemporary roles for the junior college. While the junior college has long since operated as an independent institution, no later than 1950 "it was the leadership and example of the private colleges which led to the establishment of the earlier two-year college standards." In February, 1972 the AAJC revised its name to the American Association of Community and Junior Colleges, demonstrating a change in identity and purpose. Presently, the Association envisions their role according to a seven-point philosophy:

1. The two year college is a part of higher education.
2. Separate public college districts are distinct education entities.
3. New learning resource centers, intended to centralize campus functions, should meet college requirements.
4. The creation of state-wide systems provide better financial support for instruction and learning resource programs.
5. Vocational and technical education programs are equal to academic programs.
6. New worthwhile concepts of general education should affect curriculum.
7. The significance of community control upon the institution must be considered.

The origins of these standards are to be found in the ALA annual conference in Los Angeles in 1953, and were improved upon in 1956

and again by the Committee on Standards of the American College Research Libraries in 1959. Reworded and finally published in 1960, "with their approval there was for the first time a national definition of library services for an established two-year college." (57)

In its adolescence, the identity of two-year college libraries experienced unsettling growing pains. The new standards did not please everyone. While some educational leaders were uncomfortable at the upset of the status quo, confusion set in since accrediting associations operated under a set of standards that were minimal. Many challenged the authority of the ALA to issue standards without the consensus of junior college administrators and the AAJC. Also, the nature of the standards were misunderstood and considered synonymous with the accreditation process. Since standards for evaluating the effectiveness of library services are subjective, administrators challenged its general applicability. Finally, the subjective set of standards was seen as too ambitious for small private college libraries. (57)

Today much of the controversy has been smoothed over, since educators have grown in their innovative consciousness, and academic associations have grown in sophistication and the standards have been refurbished. The 1971 joint guidelines (sponsored by the AAJC and the ACRL) recognized "a standard as something measurable, enforceable and directly related to library goals. A guideline, on the other hand, suggested a level of performance for self-evaluation.

The latest tripartite guidelines (sponsored by the ACRL, AAJC and AECT) place emphasis on a conceptualized program rather than on a geographic location of learning resources. As a final outcome, learning resources are recognized as being involved in all aspects of the instructional process, from instructional development, production, and the acquisition of materials, to the provision of services to the individual and the classroom." (57)

Summary

Library services, then, have developed in this century in the two-year college not only quantitatively by serving as the umbrella institution housing those resources that nuture communication in active education, but has grown through introspection and has altered its perspective as a service. The concept of the book depository has been de-emphasized. Today the improvement and self-discovery of the individual student encouraged by staff and faculty is paramount. The library staff, rather than serving in a custodial capacity, provides information on new materials, acquires them, or produces them, working cooperatively with the faculty on instructional development. (63:n.pag.) It has largely been decided that the terminology to be used in referring to this new approach is that of "learning resource program," an adminstrative configuration within the two-year institution responsible for its supervision and management.

Growing Needs

Invariably the needs of the two-year college learning resource program correspond to the needs of its institution. "The utilization of all resources to meet human needs in the community college library has probably resulted from its philosophy of service and instructional involvement." (21:68) Necessarily, the programs determine the material to be purchased, by those items which aid faculty and students in their teaching and studies or research undertakings. (3:176) What is the service, then, that the two-year college performs?

Philosophically the entire complex of two-year institutions can be designated as a movement. "The terms community, junior, general college, technical institution, extension center, undergraduate center are really all of a piece in the general movement to extend to large numbers of people the advantages of education and the kinds of education they need and want." (22:X) While there are still public and private junior colleges that transfer students to senior colleges, thereby living up to its traditional and historical functions, with the passage of time new needs have become apparent. Generally the entire movement has shifted its historical perspective and has maintained a certain flexibility, allowing for a wide variation in student characteristics.

> Students have different kinds of abilities, and many fail in traditional kinds of academic work. They may be able students, but they are not all able in the abstract, academic sense in which the selected students of the past generation excelled in college. The [two-year college] attempts to

> provide the kinds of curricula and guidance which will answer the problems of people who leave school with only part of an education and a sense of failure. (22:3)

Certainly this is not true of all those attending two-year colleges; there is a great deal of evidence that junior college transfers can do well in senior colleges. (22:3) But there are two apparent and distinctive functions of two-year institutions that answer to student needs. First, they provide the opportunities for drop-outs to rediscover and reestablish themselves, and, second, they offer low cost, accessible, lower division college experience of transfer caliber. "In effect, this function also democratizes higher education by making it possible for many more people to attend college." (22:3-4)

While the two-year college movement can be said to have issued forth from the utilitarianism of the twentieth century, it is also a proponent of constructive individualism, which in itself is an encouraging concept not tainted by Utopianism. Its most modern thinking maintains that every human being has a different and evolving pattern of needs. By nature, people vary greatly in innate abilities, temperaments, experiences, accomplishments, and visions of personal fulfillment. "Increasingly, the individual must choose his own life modes without benefit of tradition." This is due to a modern American individualism that is stimulated by the changing social structure and by the rapid evolution of values and techniques. (30:10-11)

Yet individualism goes only so far. For example, under appropriate conditions, 95 percent of the students in any given class will want to achieve an A. Most programs of instruction assume that not only does such a student want such a grade, but he also wants to achieve that level of mastery. Usually, at the community college level these students have succeeded in--or in many cases barely survived an educational process--that neither encouraged nor rewarded independent effort. Such students lack the ingredience to personally assume the responsibility for learning. As a result, efforts to innovate by using self-paced instruction, auto-tutorial instruction or learning packages, is not enough to meet the learning needs of these students. Achieving this goal not only means the rise of different materials and techniques, but different types of instructors and learning environments, both for groups and individuals. (43:30-31)

Wisely, two-year colleges have refined a concept of individualism that requires frequent self-assessment, appropriate revision of roles and goals and continued achievement.

> The shift, then in focus in the teaching-learning process from the instructor in the classroom to the student doing more and more independent study, further implies that the instructor must become a resource person...[that] he will assume some of the traditional functions of the librarian. (30:10-11)

Inversely, the librarian will begin taking over some of the functions of the instructor. This means that the entire educational staff will have to work closely together, spending more time in learning resource units, while learning is taking place. (30:10-11)

The need for creative inquiry emanates from the basic tenet of constructive individualism. If creative inquiry is accepted as the major contemporary school objective in answer to student needs, then in order for it to flourish, a participant should understand the collections, equipment and facilities contained in the resource learning program. There are at least four conditions for creative inquiry that are needed by the student for success in this activity.

The first condition is opportunity for mastery of established knowledge and traditional techniques for discovering knowledge. This mastery might be learned alone by the student through reference and informational materials, or it may be transmitted through group lectures, programmed books and projected materials.

A second condition needed for creative inquiry is solitude. Unlike the old libraries that massed students into large reading chambers, new thinking recognizes the need for independent solitary study. "It is an isolated and unique exploratory or reflective activity where personal ideas may be introduced."

A third condition for creative inquiry is the sharing of ones' ideas with peers. This fosters communal growth through the appraisal of others' standards. The opportunity to meet in designated conference areas set apart from normal academic activity will promote this type of change.

A fourth condition for creative inquiry is consultation with an expert. The expert may be the student's teacher, guidance counselor, community advisor or resource program librarian. Such a relationship takes place on a one-to-one basis in seminars or in class/lecture situations. (13:9-10)

The needs for creative inquiry unfold the steps that should be taken for the essential arrangement of the physical plant. This need capitalizes on learning atmosphere in all its varied facets. Since a program should function under a conducive learning environment, it is also most supportive by reflecting the curriculum of the college. Helen Wheeler proposes that the community junior college has grown to include four basic functions: preparation for advanced study, vocational education, general education and community service. The individual community college library has the basic duty of curricula-related book supply, stocking their facility for transfer students in need of materials for their prospective majors, technology programs that may profit from the support of special audiovisual materials and vocational and guidance materials collections that may be utilized by community college guidance personnel and their clientel. (22:10) "The first characteristic to be considered in selecting any learning aid is its relevancy to the goal-seeking activity involved." (16:469)

Today Stephens College, like many progressive two-year institutions, has developed a resource learning program that includes at its core a library for books and other educational media. Most importantly, they emphasize the program's close relationship to the instructional program of the college. Contingent with this, they recognize the need to "reexamine course objectives, identify educational media being employed in the teaching and finally, identify those methods, materials and media which the faculty consider critical in meeting their course objectives." (13:158)

Hawaii's two-year college system has developed favorably toward making the library a familiar and useful place for the so-called technical-vocational students. Hawaii's community colleges were built upon foundations laid by technical schools, four of which are now being converted into comprehensive community colleges. During this conversion, administrators saw the immediate need for the development of library facilities. They have been planned not as great physical monuments, but as thriving activity centers housing books, audiovisual materials, teaching machines and other resources. Their greatest challenge is in making the library as natural as is the frequenting of the student center. (11:31-33)

The incorporation of technological equipment into the life-style of the academic world is especially pertinent to the two-year college. A distinction is made between the "hardware" and the "software" that a learning resource unit houses. Generally, software comprises the computer programs, descriptions of procedure, dictionaries, instructional materials and so forth, as opposed to hardware which is usually taken to include the processors, memories, display devices, communication equipment and other such components of the system. (10:58)

The inclusion of hardware into the system is being handled with a certain amount of reticence. Just how much of the intervention of the machine is necessary to correspond to student needs? B. Lamar Johnson maintains that while technology must be employed consistent with the objectives which are sought, these aids should not become gadgets to its users. "When this is done the cause of education suffers, and multimedia facilities become in fact mere instructional toys." He stresses that the effective application of technology frees

an educational community to engage in personalized teaching activities, which are beyond the power of machines. (7:169-171)

Summary

The function of two-year colleges are aligned with student needs. Planners have found most satisfactory resource in the coordination of student needs with institutional objectives, firmly planted in a learning resource program. While students need a place for individual and social creative inquiry, that place must contain the information they are looking for. Resource materials in the two-year college differ from that of the four-year programs. Curriculum programs may be four-year preparatory or technical vocation, but they must be comprehensive in answering those varied needs. Learning resource programs, too, must be selective and discretionary about the type and amount of hardware and software available for learning activities.

Organizational Patterns

Systems theorists have been examining feasible organizational patterns of hardware and software in determining how a more efficient system with a comprehensive flexible staffing pattern and with instructional systems packages will permit greater personal contact among resource guides, teachers and students. (14-40) There is no set pattern as to how an institution must approach the organization of learning resources, but the main thing to keep in mind is that it should establish a sound program based on its needs and concepts and then to go about organizing it. (29:9)

As a method of categorizing, these four basic variables can be considered in plant design, that house learning resources:

(1) Methods of instruction based by the college
(2) Students to be served
(3) Faculty to be served
(4) The concept of learning resources (34:1)

In discovering a two-year institution's methods of instruction, consideration should be given to its philosophy of instruction. An examination of some characteristics and trends will be useful in coming to an understanding of their place in today's world. For some while now, the two-year college has been assuming major responsibility for preparing students for upper-division work at higher institutions. Since the beginning of these undertakings, it has also been acting as a single institution preparation for employment. In an open door college, any high school graduate is eligible for admission, providing the minimum requirements are met. As part of this, the junior college serves as a community college by extracting local

community members and offering them training in order to return to the community as an asset. In conjunction with these responsibilities, guidance is now being recognized as a major goal of the junior college.

> The magnitude of the guidance task is further suggested by evidence that from two thirds to three fourths of the students who enter junior colleges announce their intention to transfer to senior colleges, whereas actually less than one third continue their formal education beyond junior college graduation. Thus...most students take programs and work toward goals which are unrealistic for them. (7:41)

From 1958 to 1968 enrollment in the private junior colleges fell from 16 percent to 8 percent. During this same time period, however, enrollment in the public two-year colleges more than doubled. The Carnegie Commission on Higher Education stated in their 1970 report that wherever it is economically feasible, the states should develop programs of financial support for private nonprofit two-year institutions. On the other hand, wherever the opportunity for a new institution should arise, it should be planned as a comprehensive community college whenever possible. Their reasoning for this is that "once the occupational programs are well established, the institution can broaden its curriculum to attract students seeking a transfer program and to provide more options to all students." (27:26-28) "Occupational requirement are related to curricular content and to course relationship, and comprehension of all these is necessary in turn to build a coherent yet flexible curricular pattern." (24:10)

Since many two-year colleges are confronted with a variety of instructional methods necessary to accomplish objectives--from models that would facilitate use by technical students to bibliographical studies emphasized in four-year preparatory work--a partial list of the most used types of material follow:

books
tape recordings
phonograph recordings
16 mm motion pictures
8 mm motion pictures
programmed materials
periodicals
pamphlets
slides
radio
video-tape
closed-circuit television
prints
models
transparancies
film strips
microfilm
microfiche (29:4-6)

Of course, there are few learning resource centers that can claim to house all of these facilities representatively. The availability of hardware and software enhances instructional methodology. Two-year college administrators should keep in mind that, while their students may have a limited academic background, they have nevertheless been subjected to stimulation through a variety of media. Learning resource personnel should use great imagination in the acquisition of materials which present essential course content in ways relevant to students' previous experiences. (24:4)

In approaching the design of educational programs it is understood then that educational goals are aimed at the learner. "The learners interact with the program and the resultant resources interact with the goals as well as the original resources which support these programs financially." Jack Belzer introduces a generalized model based on this formula:

The program P = f(G,L,E,S,R)
Where P = structure of an educational program
G = a set of educational goals
L = characteristics of a set of learners
E = a given educational system
S = a subject of knowledge relevant to P
R = environmental factors (18:128)

An interesting point about this model is that the feedback process (f) keeps the program dynamic, since goals, characteristics, the system, the subject area and the environment must all in some way relate to the structure of a given program. In the actual consideration of learning resource programs in two-year colleges, they should relate directly to the subject of knowledge relevant to programs and to the environmental factors influencing them--the last two points presented in the previous model. A learning resource program would then relate directly to the other four points, supportive of students' academic activity. A more visual, diagrammatic approach illustrates the interrelatedness of the major academic aspects:

LEARNING RESOURCE SYSTEM

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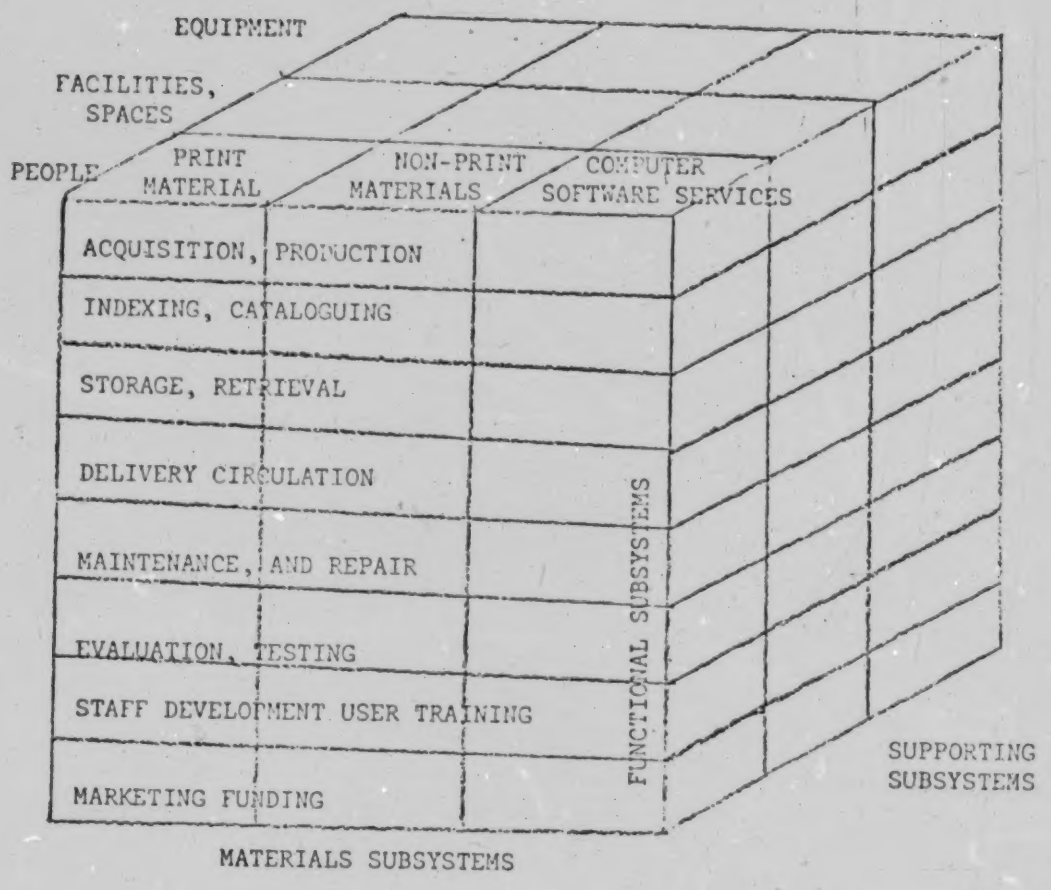

This cube-like diagram is composed of a series of "boxes" (subsystems) that build upon one another, and are interlocked to form the entire system. Each of the three planes are characteristics of the subsystem: supporting subsystems include equipment, facilities and space, and people; materials subsystems include print, non-print and computer/software services; and functional subsystems comprise the remaining categories to the left of the graph running vertically

from acquisition and production to marketing and funding. "The three dimensional system diagram...is useful for conceptualizing the interrelationships of the subsystems." In many cases the functions for each type of material closely resemble those performed with respect to another material. This multi-dimensional perspective points out the interdependence of one subsystem upon another. It confirms the fact that many people need to expand their range of familiarity with the various novel learning modes. Also, performance goals are based on the types and sizes of learning areas and the kinds of equipment and guidance available. For example, "user training" could not be successful unless the three categories of materials were organized and accounted for. However, these materials remain valueless unless the "people" in the supporting subsystems acted upon the material at hand with the student in mind. The action cannot take place without the presence of "facilities," "spaces" and "equipment." At the same time,the trainee is being taught the aspects of the "materials subsystems." (65:14-27)

Stepping down from the overall design of learning resource programs, how do they answer to the student's need for representative study material and for a favorable climate for study? A statement of the program and its functions might include some of the following items:

(1) Statement of purpose
(2) Statement of organization
(3) Personnel requirements
(4) Job descriptions
(5) Analysis of materials collection
(6) Special services areas
(7) Budget projections
(8) Space requirements (29:9)

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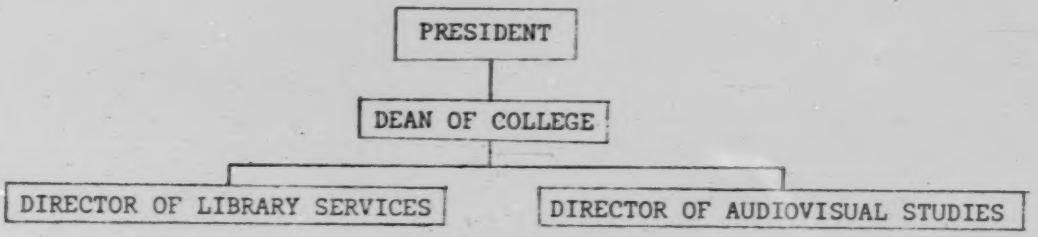
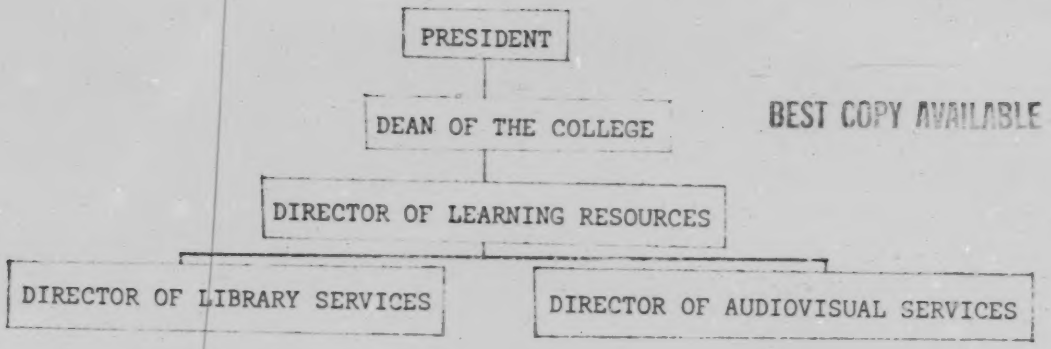
Designated statements clarify a program's status and can lead into more specific patterns of organizational structure. Among the several types of patterns formulated, the more traditional ones emphasize that library and audiovisual services are administered separately by directors, who in turn are answerable to the president or dean of the college.



The operability of this pattern relies on the soundness of the total organizational structure. "Conflict could arise in a number of areas including budgeting and relationships with instructional personnel... if the two services are housed separately, the physical obstruction may tend to disuade the user from tracking down all the material available." (29:10)

This approach is losing its impetus in the development of learning resource programs. Its weakness is in the disparity of the two services. When an irresolvable conflict is presented to the president through the dean, this emphasizes the differences between media rather than complements their similarities. The following diagram coordinates the effort somewhat by creating an administrative position that combines both services under one office.



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But the services are still considered separate units. The advantage is that "this organizational structure may provide for more coordination of service, but it still separates materials." The qualifications and the background of a learning resource program's chief administrator are as yet undecided. Should his training be oriented to both print and non-print materials, or should his background be largely administrative? (29:11)

Researchers at William Rainey Harper College established a deanship and two directorships into their learning resource organizational design. "The dean...is directly responsible to the vice-president of academic affairs for the development and effective operation of the Learning Resource Center." He assists upper-administrators in planning and organizing educational programs; he is the major developer and implementator of its in-service program. Requirements and qualifications for staff are based on his recommendations, but he consults with division chairmen on objectives and their performance appraisals. The dean evaluates staff for promotion, leaves and tenure, and recommends to the vice-president the program's annual budget, at the same time executing the adopted budget. (38:6-7)

The operation of library services is carried on by an administrator directly responsible to the dean, the director of library services.

This individual supervises the activities of library staff and "directs the appropriate personnel in the acquisition, circulation and maintenance processes of all materials in the library collection, including books and periodicals, and instructional materials." He assists the dean by advising on the annual budget and by reporting periodically on library use and facility improvements. In the area of public relations, he encourages the fullest use of library resources in cooperation with staff and students. (38:8-9)

The director of instructional services, also responsible to the dean, assists in organizing educational programs that will blend the services of instructional materials to faculty and students. He develops any new system guidelines needed for William Rainey, concentrating on the inclusion of self-instructional materials. The college asks that he join and support national and professional associations. (38:10-11)

The chief administrator, then, like William Rainey Harper College's dean of learning resources, reports to the administrative officer of the college responsible for instruction and has the same rank in status as others with similar institution-wide responsibilities. This ranking supplies him with the authority to manage the internal operations of the program. (38) Regardless of rank and title, a learning resource leader and administrator must be adept at breaking down past barriers to progress among library services, audiovisual services and the entire educational program.

Northern Virginia Community College has adopted a program that appears to successfully meet its needs. "The staff has taken a general

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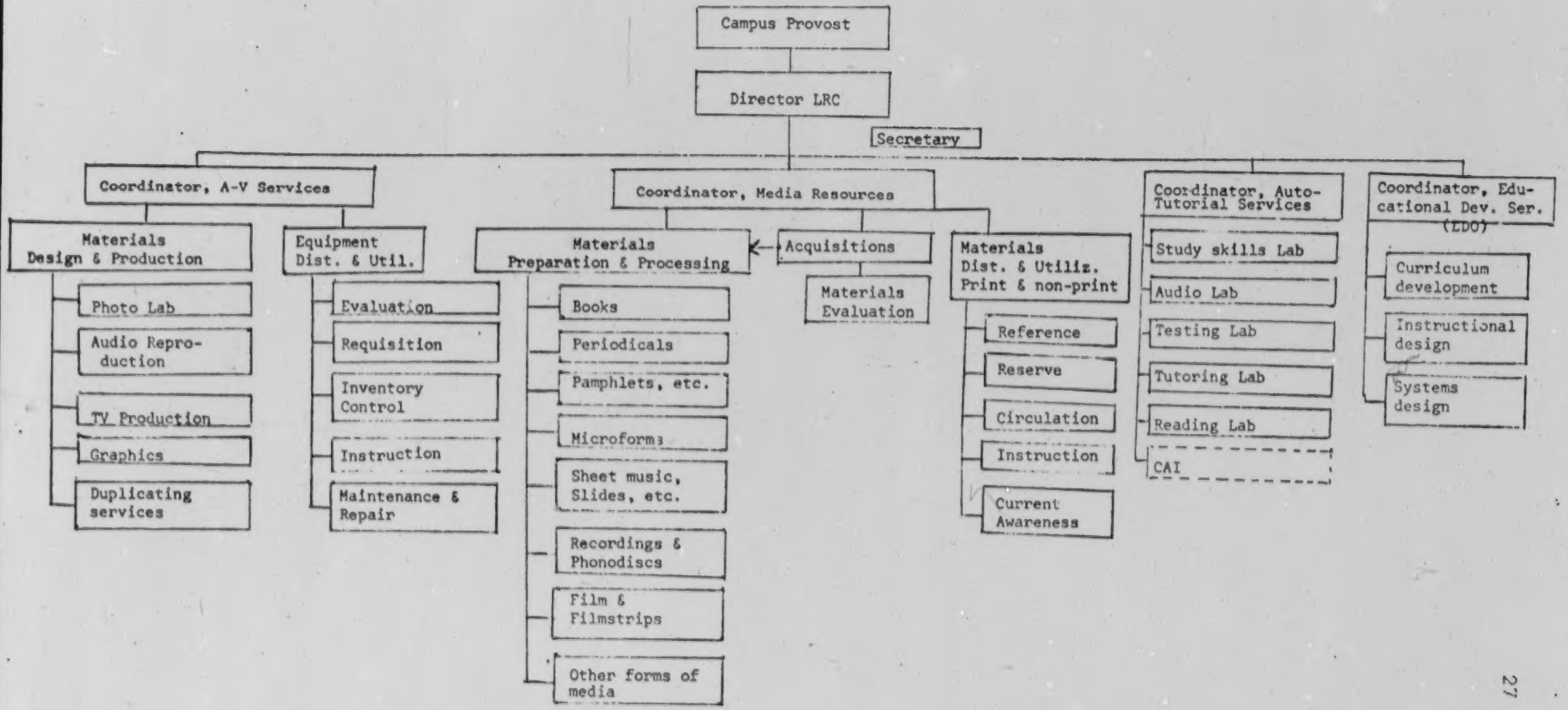
CHART C--LOCAL CAMPUS ORGANIZATION (82)

Alexandria Campus



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approach which mobilizes the resources of the institution behind individualization of instruction." (39:41) The four major services--Audiovisual, Media Resources, Auto-Tutorial and Educational Development--are headed by staff "coordinators" which in turn, answer to an "LRC director." Each service has been methodically broken down according to its particular functions, and the larger ones are comprised of several departments. Audiovisual services, for example, is further divided into Materials and Equipment, while Auto-Tutorial services stand as one unit. Media Resources, the largest unit, is divided into Materials Preparation and Processing, and Materials Distribution and Utilization. The storage and retrieval of printed matter is only one duty of one unit in the entire Program. This organizational pattern provides the services that advance and alters the traditional concepts of the daily operations of a library.

The educator/administrator placed in the position of educational development is ascribed as the EDO officer. As a catalyst, the EDO collaborates with administration and faculty on curriculum, instruction and systems design; helps to identify and anticipate problems in these areas; provides the needed research for decision-making; follows adequate procedures for participation in the decision-making process. (70:2-3)

In order to accomplish these tasks, the EDO must process expertise in research design, analysis and evaluation; in assisting the processes of communication and participation among people; and in the judicious introduction of new kinds of data into the operational

mechanisms of the institution. (70:6) The EDO is next in line for direct support and encouragement to the learning resource director, who is in direct communication with the campus provost. Thus, the lines of communication for problems, proposals and adaptations are efficiently assembled.

A modern organizational concept such as this one requires that employees face internal as well as external survival requirements for their program. The media specialist or coordinator, also, is being confronted with changing school needs. He, as a specialist in his field, is truly in a privotal position and it is here that perhaps the hiatus between industry and higher education can possibly be breached. Another alternative that might be added to existing structures is the time-sharing computer. This machine serves as a retrieval base for additional information that is filtered through the now popular computer-assisted instruction. (CAI).

During the sixties, computer technology reached a high level of acceptance in most educational systems, especially with the marriage of the teaching machine and the flexible and "inhumanely impatient" digital computer. Thus, the so-called CAI was born. This system will reportedly "never get tired...allow the individual to proceed at his own pace...make possible a daily tracking system in which a youngster moves up or down each day after each lesson...ensure the acquisition of basic skills for [students] of educationally deprived backgrounds...and provide a complete, instantly available record of each [student's] achievement and furnish information for course

modification." (18:162) CAI, when characterized as a machine-directed learning system, attempts to program instructional sequences that will tailor various needs. Not enough is known about the human learning process to prescribe a specific model, and usually proceedings are on a trial-and-error basis. Questions for the model are usually multiple choice, and rarely do they request that students correct their errors. A contrast to machine directivity of CAI is machine docility, where under computer or human control, the system performs operations on the bases of student requests. Under this learner-directer mode, operations are strictly for information processing and data retrieval in order to gain meaningful solutions to problems. And when this is used appropriately and uniquely for its particular capabilities, the student has the option to study subject matters heretofore beyond his reach. (18:162-163)

Summary

The new learning resource programs will contain many of the fundamental services that enhance learning along with newer media and information retrieval that will assist in implementing the philosophy and programs of the individual two-year college. The designs remain flexible enough to forecast present and future goals and developments applicable to most two-year institutions. However, the nature of the learning resource program insures and accounts for flexibility--an asset to evolving students and educational needs. Individualism and personality variations are accounted for: instructors and librarians may reverse, share, or coordinate their roles, while the student can best realize his needs for singular and group creative inquiry.

Relating the Learning Resource Program

Harvey Branscomb contends that there has been lacking a sense of common purpose and, consequently, attention to the problem of the most effective coordination of effort. Because of this, he states, the program of the library and that of the faculty have failed to become a unit. (3:196) The relationships of library staff to teaching staff, of these two groups to administration, and of all three to both the student and the learning resource program must be clarified and strengthened.

> The familiar library program has been one of securing more and more facilities, a program which no one could deny to be essential for effective work. But if its objectives do not look beyond this, or if these further ends are conceived to be in the hands of other branches of the college, the facilities secured will always remain to a certain extent potentialities rather than active instruments of education. (3:198)

Traditionally on a college campus, faculty directs most of the general reading; it is faculty to a certain extent that controls student behavior. The librarians' relationships to the students receiving assignments and confronting them for materials guidance is one that is free to deal with student questions. (3:207) One suggestion for strengthening teacher-librarian relationships reaches beyond the job description of the traditional librarian's role. It is that librarians assume instructor duties by teaching courses in regular departmental fields. (3:208)

According to a recent statement drafted by the American Association of University Professors, the Association of College and Research Libraries and the Association of American Colleges,

> College and university librarians share the professional concerns of faculty members. Academic freedom, for example, is indespensable to librarians, because they are trustees of knowledge with the responsibility of insuring the availability of information and ideas...The character and quality of an institution of higher learning are shaped in large measure by the nature of its library holdings and the ease and imagination with those resources are made accessible. (62:n.pag.)

The relationship of the educational staff to the learning resource staff is beginning to equalize. Both groups are beginning to invade each others' boundaries, since more and more, one cannot do without the other, which in turn is triggering inter-cooperation and coordination. The planning of a new learning resource center on the Cazenovia College Campus, for example, involved an administrator, a librarian, and a field consultant, along with faculty members, all helping to determine the particular learning resource requirements of the college. Today, a faculty committee operates in an advisory capacity in conjunction wtih the library staff and director. (32:84)

The organizational pattern of a learning resource program is conducive to teacher-staff relations. Rather than overlap, they complement each other in a most efficient manner. With new implementations of hardware into the system, "the college instructor can now do creative teaching that the outmoded lock step of the medieval classroom precluded." (17:145) The learning resource program is a vital tool for teachers, and their duties can not viably sidestep an established

program. Thus, a new equalizing role has been created for teachers and library staff that brings both together under the heading of Library-College faculty.

Outside of their specialized activities (where the educator primarily concentrates on his field of interest and the librarian primarily makes available the tools for amassing this knowledge), they both will share common duties. The library-college faculty member counsels individual students; he is also a "bibliographer extraordinary" where he can prescribe the medium or media which will best start the student on his way, (17:145-146)

For the first time in the history of education (as described by Louis Shores in his concept of the Generic Book which is the sum total of man's communication possibilities) media has become so plentiful and varied in format, subject and level, that individual differences in students may be matched by individual differences in media. The total of man's communication possibilities adds enough format variation to be of particular significance to individual learning. (17:XI)

Fundamentally the library-college faculty exists for the students it serves to instruct. Two-year college students differ characteristically on the most part from higher level students. "The provincial view that one can take students from various socio-economic and intellectual levels, in terms of family backgrounds, and educate them with an undifferentiated set of educational services must be put to test once and for all." (24:4) In a large part the two-year college has opened its doors to the failure-oriented student. Since traditional

methods of instruction have become associated with failure for them, many two-year students have developed a strongly limiting failure syndrome. Because of this, no amount of instructional skill will entirely offset the pattern of failure he has learned in his twelve years of schooling.

To alleviate psychological obstructions to education, a learning resource program must be preempted by guidelines with a determined set of relationships among students and library-college faculty:

1. The instructional situation must be devised to motivate the disadvantaged learner through ways other than the traditional practices.

2. The failure-oriented learner must have guidance in selecting realistic goals continuously as his skills and aspirations change.

3. He must be given specific training in the basic cognitive skills required if he is to succeed in his goals.

4. Often this student lacks the outside support of an educated interested family with positive attitudes toward education. He needs extended instructional support, more resources of teacher time, equipment, facilities and money.

5. If he is to succeed he must be allowed to escape the traditional pattern of fixed-time courses and work at his own rate. Therefore a new instructional design must be incorporated to meet his needs.

6. Both the attitudes of the library-faculty and students must be modified so that they see educational activities positively. (25:3-4)

The tasks that a two-year student needs to perform in order to accomplish his goals are directly related to the learning resource program, its facilities and its library-college faculty. Each student is applying his designated tasks to the system, and to some

of the subsystems within the larger framework. A "system can be defined as a set of parts coordinated to accomplish a set of goals. Necessarily a system is comprised of many interconnecting components (classes, tutorial sessions, learning activities) that entail the "subsystem." Also, a system is concerned with repeatable operations that have a common purpose. The learning resource facility makes available the materials needed to implement the short-term goals of the subsystem. (The system itself refers to the structure of the entire educational program that is primarily concerned with the long-range goals of a college.) Complex facilities such as dial access or instructional television have been discarded in favor of the tutorial approach in dealing many times with underachievers. A working relationship among students and library-college faculty members takes precedence over the more sophisticated hardware and software acquisitions of a program. It has been suggested that learning resource programs in two-year institutions avail themselves of a reading lab, writing lab, math lab, self-instructional materials center, center counselor, tutorial center with carrels and study areas, offices and small-group contact areas.

Following is a diagram of several possible relationship formations encouraged by learning resource programs interested in promoting positive motivation, guidance, basic training and instructional support. (25)

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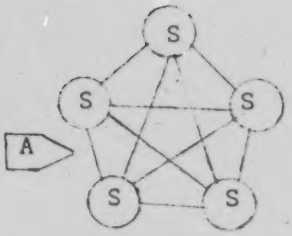
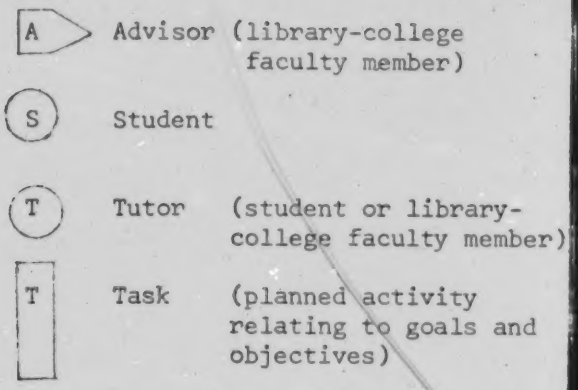
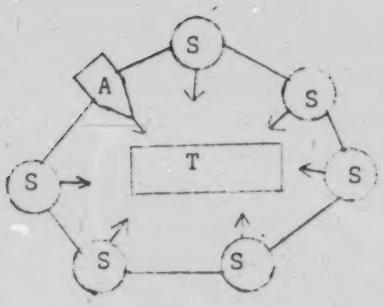
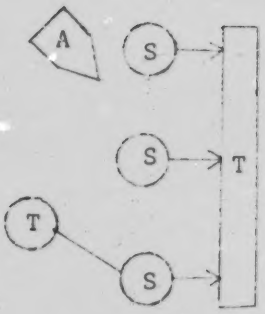


A. Discursive Group
(unstructured discussion)





B. Maieutic Group
(structure discussion)



D. Task Group
(individualized, structured activity)

C. Tutorial Group
(one-to-one, advisory)

In group A the advisor provides instructional support without imposing his direction on the activity at hand. The opposite is true for group B, where the advisor's position provokes leadership, rather than guidance because individuals within the group are focusing their attention on one common task. Notice that in group A, however, students are interrelating without the benefit of the task or direct imput of the advisor. Tutorial groups, as represented in group C, are

one-to-one relationships involving either a tutor or an advisor arranged as academic guidance counselors to suit the immediate and personal needs of the student. Group D is a more structured session, smaller size than groups A or B, where the students center their activities upon a common task, through the intervention of the tutor and the observation of the advisor. These group formations suggest the possibility of relationships--answering to student group and individual needs--that can be encouraged by a library-college staff and easily facilitated into the design of a learning resource program.

To refer to Northern Virginia Community College as a noteworthy example for program implementation, they have placed their center at the hub of activity on the campus. In furthering the concept of meaningful interrelationships among all academic members, they reached a dramatic decision in planning. Some members of their faculty will be housed within the large areas of the learning resource center. "This approach combines the availability of staff, materials, and space to help the instructor move from one posture of teaching to another." Spaces are designed to permit dispersed counseling in offices and student service areas. They also emphasize the powers of individualized instruction, and this is reflected through their philosophy that "accessibility is a paramount feature in campus design." (39:42)

While Northern Virginia espouses the centralized system as an exceptional spacial arrangement, there are some proponents of the decentralized system. The decentralized system incurs greater cost, but it provides easy access for department users and encourages

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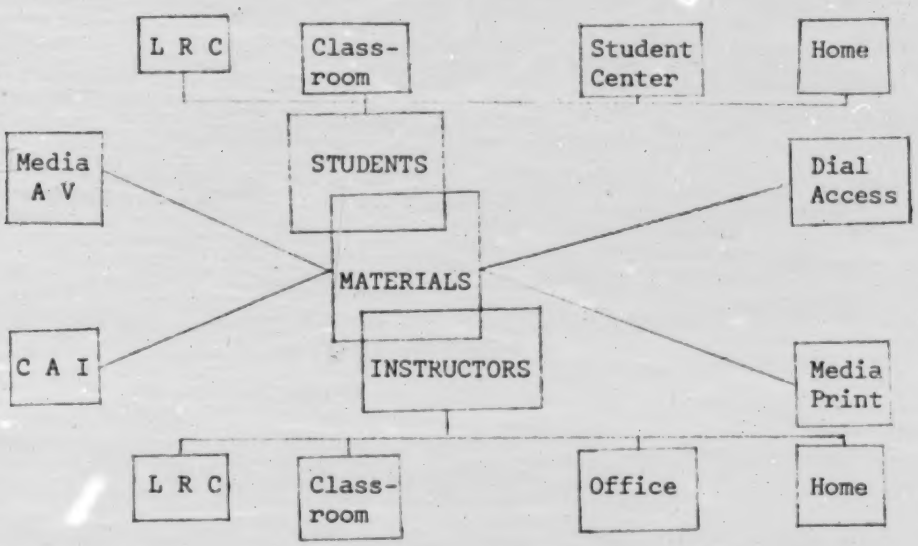
spontaneous usage where laboratory-related information is readily available. Either plan has little bearing on the direct staff relationships with students, but college-library faculty interrelationships would lack in immediacy under a decentralized system. To decentralize a learning resource program, would mean to decentralize its faculty geographically, and this could hinder its potential for unity and uninhibited communication.

There is no limit to the scope and breadth of interrelationships that is intensified by the fusion of learning resources and services.



The preceding diagram depicts the involvement that students and instructors share with the many types of resource materials (29:8) Both students and instructors have as a point of reference, the actual learning resource materials; they also share common experiences in the classroom and their respective homes. The fact that a great portion of students' time is spent in the student center, while a large portion of instructors' time is spent in the

office, changes each's perspective somewhat. The student center avails itself to casual and spontaneous discussion, while the office connotes planned and possibly structured guidance activity.

Summary

In 1965 B. Lamar Johnson advised the desirability for teachers and librarians to merge into a unified instructional staff. Such a merger should be extended to the point where librarians share with their faculty colleagues insights regarding instruction--including both the problems and the achievements of students. (32:29) Traditionally, educators have always controlled student academic behavior, but today researchers are encouraging librarians and faculty to merge, thereby sharing and equalizing their roles. To accomplish this, the education community needs to understand their relationship with each other and how they can effectively promote individualized instruction and student self-discovery.

Evaluation and Adaptability for Two-Year Colleges

Does the establishment of a learning resource program make enough of a substantial contribution to students' lives to warrant the popularity it is receiving today? The media program has been found to be indispensible in educational programs, such as those of two-year institutions that stress individualization, creative inquiry and independent learning. In such institutions where two-fifths or more of the students' time is devoted to this form of learning, the students turn to and depend upon the media program increasingly. "The extent to which current curricula emphasize self-directed learning is generally a matter of degree rather than of direction." (64:3)

While it is beneficial that the library-college staff assist in planning curricula, it is more important that students find available resources supportive of their studies, Harvie Branscomb cited that student interest in the library as a place for research is deficiently low. While his work is devoted to the problem of the college library per se, he raises provocative points about the "library method" that reinforces suggestions for an alternative program applicable to the two-year institution. The library method is a traditional college teaching practice where the instructor employs the lecture method in this classrooms and supplements these talks by assigning outside readings relevant to the lecture information. Branscomb admits the disservice that this method affords students.

> "At least one college librarian can be cited who has been willing to put into print his conviction that the real function of the college library is to serve the community of scholars who compose the faculty, and that those colleges which do not propose to encourage research work need only a small book collection. (3:56)

Briefly, he goes on to say that instruction by means of one or two text books read by the entire class accompanied by lectures provides too uniform a fare for a group of students who are essentially diversified. Besides this, the library method gives students a one-sided view of a field of study--in itself a contradiction to the tenent of academic freedom. Finally, he cautions readers to consider whether a substantially greater emphasis on reading in college instruction is desirable, although he does contend that the trend is toward a greater use of books and related materials rather than away from them. (3:56-63)

In evaluating and justifying the need for learning resource programs, we must come to a philosophical understanding of a desire to seek alternate plans. For the reasons stated, Branscomb was disillusioned by the services college libraries performed in contrast to their ideas. (3) If the traditional library method proves practically ineffective for four-year colleges and universities, it would mean instant failure for two-year institutions.

As part of the California Study of General Education in the Junior College in 1965, B. Lamar Johnson questioned administrators on notable needs and problems in library systems. A substantial number of administrators stated that many instructors did not seem

to relate assigned reference work to the students' course work. Also, many teachers seemed ineffective in motivating students to use the library at all, and to some it appeared that library materials and services were insufficient. (32:17-22)

Replies to suggestions for improvement focused on ways to better use library facilities. Among the specific recommendations included the coordination of audiovisual centers with the library. (32:17-22) The traditional college library would not be functional for two-year students, and by 1965 most administrators recognized the need to evaluate the library in terms of a total resource program. Two-year college libraries, because of their relative newness, have had the advantage of operating as experimental college libraries. Such was the Mount San Antonio College Library. "The philosophy which guided planners of the library...indicates the experimental nature of the facility." (32:53) While administrators there wanted to build a fine library collection, they believed that the library must support, to the fullest extent, the curriculum. ("We wanted to assure a welcome to the students who were wary of the library, or who had had unhappy experiences in attempting to use its resources.") (32:53) In doing this, they highlighted faculty-librarian rapport, emphasized concern for the individual and added on an audiovisual department. ("In fact, so important do we consider this segment of the library services that the audiovisual department is also one of the reference libraries.") Because of the experimental nature of their program, Mount San Antonio College recognizes the dynamics of change, the need for continuous evaluation, the flexibility of programming and the role of technology. (32:53-58)

Most two-year institutions will concur with this philosophy. Wright Junior College in Chicago presents a philosophy of service adaptability and innovation. Adaptability is emphasized as that feature which includes modification, simplification, and expedition of existing facilities, collections and procedures to provide ever-improved services to the clientele. (32:71) Thus, experimentation, coordination and flexibility are by-words in the evaluation of any effective two-year resource program.

> In a September 1972 nationwide survey of new community college resource center buildings (Library Journal, December 1, 1972) 47 colleges reported completion of a new facility during the school year 1971-72. In addition to the library and various audiovisual distribution and production services, these new facilities included such diverse Learning Resources as reprography, tutorial services, study skills center, and video and audio learning laboratories in various subject areas. (40:91)

At Portland Community College a multi-discipline learning resource program within a "shopping mall" has been constructed, and at Meramec Community College, St. Louis, a recent community college conference gave demonstrations in 18 different learning laboratories, showing the diversity of learning resources in personnel, facilities and materials. Also, at the Community College Media Association in Southern California, a survey was conducted in 12 local community colleges that learning skill resource centers include mathematics, basic education, chemistry, stenography, study skills, music, speech, biology and English, making the community college view of learning resource programs more comprehensive. (40:91)

Physically, it is not always easy to change from one system to another. This is especially cumbersome when a two-year institution relinquishes its traditional library for a more up-to-date model. Changing an old facility into a resource learning unit calls for space devoted to materials and facilities.

The College of DuPage has developed a concept of "intershelving" or "integrated media collection." Since 1967 all materials have been catalogued, processed and intershelved. Non-book materials are also represented in the card catalog. Their philosophy: "We intend to make all materials easily accessible and retrievable to everyone. This, we believe, is one of our main functions." The college-library staff is encouraging about its success; they found that non-book losses numbered far less than book losses. While they admit to periodic replacing of non-book materials, they justify the expenditure in the same manner in which they face book damages. They recommend that intershelving will succeed if given the chance and if fears are replaced by confidence. They succomb to the belief that learning resource programs treat all materials equally. (56:87-88)

Regardless of the shelving system of materials, the size and type of resource collection will differ in a two-year institution from most other institutions. A large university library can adequately and realistically plan to purchase all pertinent books published in the United States at a yearly estimated budget of $150,000. But in the community college library the problem is vastly more complex since its resources are limited to print materials: many technical subjects that are a part of the two-year college curriculum lack standardized bibilographies for books, and even listings of non-

print materials are rare. Before 1950, the two-year college had no provision for non-print media. However, as these institutions have developed in the past two decades, budgeting must be inclusive of all types of media. In 1960 the American Library Association recommended as part of their standards a five percent annual budget for the library, excluding audiovisual services. Melvin Voigt claims that this has proven adequate where a basic collection already exists. (26:69-74) A formula for the size of the book collection was published in May, 1960 in Standards for Junior College Libraries: Here was suggested that the book collection be based on a minimum of 20,000 volumes with an additional 5,000 volumes for each 500 students after the first 1,000. (57:223) Written into the AAJC-ACRL 1973 guidelines are suggestions for cooperative arrangements in the sharing of resources with other local institutions.

A re-evaluation and a consequent manifestation of the new attitude towards learning resource programs is the physical location of the library at the core of the main instructional facility presently located on several new, small campuses. The Carnegie Commission, in their 1972 report, on instructional technology on higher educaticn believes "that the library, by whatever name, should occupy a center role in the instructional resources of educational institutions." (26:33) They also suggest that its personnel should be available not only for guidance to materials, but also for the purpose of instructing. All non-print information, maintained as a part of a unified program, should be catalogued and stored conventiently for

retrieval. Since libraries that assume these additional functions will fare additional costs, they may be offset by consolidating the library budget with the non-print media budget. (26:33-34)

Summary

There is not a professional educational association that does not believe in the growing value of learning resource programs. Media programs are in fact becoming indispensable to two-year college curricula. Most administrators contend that what is best for the students' education is best for the learning resource program. An evaluation of this has proved that these programs operate most effectively if they maintain the characteristics of adaptability, flexibility and implementation. Realistically, however, since two-year institutions have proportionately smaller enrollments, it is difficult for them to build up substantial acquisitions. As compensation for this, it is suggested that two-year institutions develop cooperative arrangements with neighboring libraries, colleges and communities. There are no final or conclusive studies on the success of these programs, but their popularity and support reinforces the fact that they are heading on a positive track towards fulfillment of educational and community needs.

Future Implementations

The future of viable learning resource programs appears hopeful, and it would be safe to assume a positive attitude about their continued growth and success. Historically, educational institutions have carried an unusually conservative image. As quoted by Phillip Coombs, in Technical Frontiers of Education, "Studies conducted at Columbia Teachers College show that the typical time lag between the inception of a new educational idea or practice and its adaption by a majority of schools or colleges has been on the order of 25 or 50 years." (69:2) In 1966, John F. Harvey wrote that the state of the theoretical development in junior college librarianship has been comparatively good, ever since the role of the college library was first developed by Branscomb and Johnson. He added that there was a deplorable gap between theory and practice, and that "junior college libraries are among the poorest kinds of libraries." (49:231) By 1972, however, in less than a decade's time, educators were praising librarianship advances: "The community college library today has emerged into a path of purposeful activity. More may be expected." (21:77)

Continuing to face needed changes in the precarious future of education, there are two stablizing points offered for consideration: "(1) Whatever we do must be comprehensible, and (2) our system must be humanistic." (30:14) Not only must administrators fully understand their actions, but innovations must reflect concern for the individual

more than it has in the past. "Whatever we do must reflect the unity of the function of the system, and it must reflect our organization pattern, and by the same token, the organizational pattern reflect the innovation." (30:14) The individuals spoken of are not solely students; considerations also extend to the library-college faculties, the administrators as leaders, and the community as partners in cooperation. "And the great challenge to us in the future as we develop sophisticated innovational systems will be if we can establish comprehensible and humanistic approaches to man and the machine." (30:15)

In speaking of the future, then, is implied the incorporation of the machine and all accompanying implications of technology. Many two-year colleges have applied "educational technology--television, films, computers, teaching machines--to instruction..." some more limited than others. (18:19) "Sometimes the objective is to reach them at less costs...to provide an improved range of materials, to offer greater opportunity for independent study, to permit more student response, or to adapt instruction to different styles of learning." (65:4)

Since concepts have been formalized and educators are being briefed on the variety of the educational technology, the term still refers to intentions rather than satisfied achievements. The fact that "audiovisual aids" is the more popular term in lieu of "educational technology" may show that the general public is not at the accepting stage yet. (20:2) However, the experts caution against moving too

hastily into more complex technological equipment use. Many believe that before installing equipment into a learning resource center, a profile of teaching aims should be sketched. Any campus study prior to the purchase of equipment should be based on its instructional methods and systems, not on equipment. "The kind of experiment most needed would begin with a careful delineation of teaching aims in behavioural terms, stating what the student is expected to be able to do, after instruction, that he could not do before." (20:10)

The Carnegie Commission on Higher Education has observed that the new technology thus far applied to instruction is adding to, rather than replacing, older approaches. Nevertheless, by the year 2000, it appears to the Commission that a significant proportion of upper-level instruction may be carried on through informational technology. While on-campus educational technology will consist of 10 to 20 percent of the total educational program, they state that it will penetrate much further into off-campus instruction at a level of 80 percent. The 1972 Carnegie Commission report on higher education spearheaded the importance and implementation of instructional technology. They make no little issue about what they term "the fourth revolution" in education which is "portended by developments in electronics,...The Fourth revolution has been emerging from the realm of prophecy for at least three decades. The electronic media that give it its most futuristic characteristics already exist." (26:9)

Briefly, they describe the first revolution as the differentiation of adult roles, when the task of educating youth shifted from home to

the school. The second revolution was the adoption of the written word, over oral instruction, as a tool of education. The invention of printing and the availability of books mark the third revolution. "If electronic communications have generated a fourth revolution in education, the growing abundance of information is certainly generating a fifth." (26:29)

Just as ideology changes, "equipment and hardware are undergoing constant modifications and improvements; new kinds of equipment and new models of existing types are coming on the market daily." (5:C-1) The following new technologies seem to hold prospects for the future:

1. Cable Television
2. Videocassettes
3. Computer-Assisted Instruction (CAI)
4. Learning Kits to be used with audiovisual independent study units (18)
5. Dial Access Information Retrieval Systems (DAIR) (20:199)

Since experiments and new implementations will require constant evaluation, the Commission suggests that independent assessment projects or agencies be established in the very near future, "... to provide ongoing and impartial study of the total impacts of the new technology." (26:7) For the time being, these points may aid the administrator in making wise and adequate equipment purchases:

1. Purchase only the equipment needed immediately, and which the faculty is able to use effectively.

2. Purchase initial equipment that will meet basic functional criteria, which is simple and uncomplicated in operation and generally less costly than the sophisticated, complex equipment that may be more appropriate for later purchase.

3. Whatever equipment is purchased now should form systems of compatible components, and should permit additional components of equipment to be added later.

4. Budgets can reflect a realistic approach to equipment change and obsolescence by providing annual funds specifically for replacement, upgrading and expansion of media systems and components. (5:C-1-C-2)

According to Peter Drucker, author and consultant on industrial and management topics, "what needs to be watched is 'young technology,' one that has already had a substantial impact, enough to be judged to be measured, to be evaluated." (67:6) A brief description of some innovative technologies applicable to the two-year college follows:

Cable television: This type of television is one form of instructional television (ITV). Other, more established forms are closed circuit television, broadcast television, videotapes, and videocassettes. The greatest advantage of cable television over the other forms is the large number of channels it makes available, providing an opportunity to carry many programs at one time, thereby serving a greater number and variety of people. Also, cable television signals can be distributed to classrooms, homes and businesses. (26:20-21)

Informed predictions have been made that the nation will be "wired" within five to eight years. The lead time in preparation for such a forceful innovation is very short. Of prime encouragement was the long-awaited federal regulations announced in March of 1972. Here, the Federal Communications Commission reserved one

channel in every cable system for educational use. Now aggressive leadership is needed by community and junior colleges in local franchise negotiations, so its public will receive the quality programs such opportunity ensures. (53:9) A fine example of this is the California's Coast Community College District's implementation, presently serving 51,000 people on two campuses. The term communiversity is used to signify the combining of "university" and "community" in offering a wide segment of the population a chance to go to college by television. There are five broad areas it covers in its broadcasts:

1. Community-oriented programs to focus in on local problems, interests, news and documentaries
2. Municipal service to relate the county and city governmental issues
3. Instructional programs for K-12 levels
4. General education programs
5. College-level courses offered for or without college credit (58:12)

Videocassettes: These instruments are not yet generally available, although there are models on the market. "The user simply attaches the cassette player to his own television set, inserts a cassette and depresses a button." Some models are the size of a paperback book, and they are easily portable. In a learning resource unit, storage would not be a problem, and its usage will depend upon each institution's course curriculum.

Pre-recorded instructional materials can be used in varying degrees:

1. As the total teaching and major resource in which course content is presented.
2. As supplementary or correlative information.
3. As enrichment in which recorded material is not related directly to course content.
4. As remedial aids that provide for make-up or concentrated attention in narrow subject areas. (18:338)

Computer-Assisted Instruction. This type of instruction has evolved from B. F. Skinner's concept of programmed learning, and the conventional teaching machine "is essentially a presentation device for imposing some control on the learner's use of the program." While the teachine machine could not "evaluate" a student's activities until the very last response was received, electronic computers offer much sharper techniques. CAI is an extension of teaching machines. It can store "all previous responses; the time taken for this and other items; the student's IQ and other attainment and personality factors; the student's own wishes; the behaviour of all the other students who previously worked through the programme." (20:193)

Learning Kits. To promote independent study, learning kits or packets are comprised according to curriculum needs, to accomplish course objectives. These kits enable the student to work at his own pace and offer a supplementary reading list or audiovisual aid list, to accompany the kits.

Dial Access Information Retrieval System. This innovation designed for schools, colleges, and universities across the country

enables teachers and students to dial a number and be provided automatically audiotape or videotape programs from a centrally stored area. (66:34) There are an estimated 120 dial access systems in all levels of education throughout the country, and teachers can retrieve limited amounts of instructional material via audio and audiovisual channels. (18:75-76)

Summary

Does the implementation of these machines bear much relevance to the future of learning resource programs? Since learning resource programs reflect curriculum and curriculum reflect students needs, what amounts and what types of technology will be relevant to the growing number of two-year college students in the future? The Carnegie Commission reports that while the use of electronic technology is in the experimental stages of development in libraries and programs of instruction today, its use will be widespread by the year 2010.

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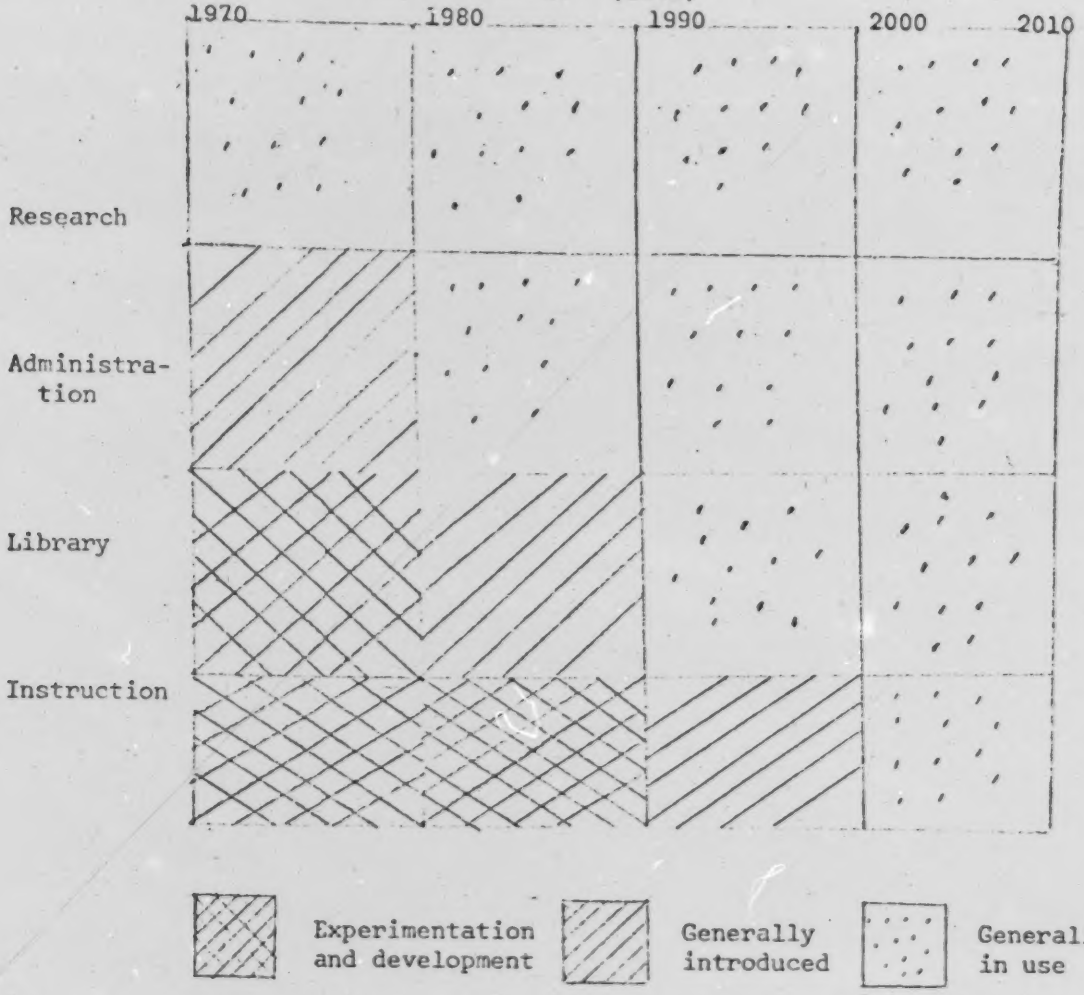
Estimated Use of Electronic Technology: (26:2)



Instructional technology will become part and parcel of the future of learning resource centers. Librarianship information and handling is concerned with information in any form. Thirty years ago, B. Lamar Johnson was talking about an instructional materials center. He did not call it that; and we do not call it that today. Terminology may change, but the concepts are the same. Through these concepts we can innovate and begin to diffuse our learnings.

Conclusion

No one really knows what the future will be for the two-year college, but for planning purposes, it is usually good to begin with the knowledge of what is good practice now and make the best, most well-founded assumptions as to the probable directions for the future. "Educated guesses" are neither simple nor easy; hypotheses directed to the two-year college must be formulated to assure flexibility, to permit change, adaptation, expansion if necessary, and full utilization of methods and media that have yet to evolve. (35:3-4)

In an analysis of future needs, implementations must be formulated from the understanding that all aspects of the two-year college are interdependent upon each other. A learning resource program functions on the basis of its college's existence, and the institution cannot sustain itself without the assistance from the outside (federal and state funding, community support, size of student enrollment, and participation in cooperative projects with other institutions).

In the first phases of development, an implementator might begin a critical analysis in answer to a series of questions that directly relate to his institution's needs and may supply a picture of where it is heading.

1. Does the learning resource program, as part of a LRC or college library, reflect the philosophy of education at the

institution it serves? If the system is essentially traditional, then is it advisable for a library to incorporate change? With respect to the programs that are set up in the curriculum, would it be more practical to enlarge the book collection or branch out to other forms of media?

2. What is the type of distinction that the individual college strives for? Is it noted as a private college, a community college, or a technical-vocational college? Depending upon the desired areas of concentration, what are those aspects that need emphasis? Is it individual instruction and guidance, team effort, or lecture and discussion methods?

3. How is the arrangement of the academic staff best suited for the institution? Is it more feasible to maintain a dual system of librarianship and instructorship, or would the blending of both into cooperative roles as the library-college faculty most advance a college's needs?

4. To what degree and to how many students does the two-year college extend its program? Basically, does it serve the needs of a select group of transfer and general education students, or does it open programs in vocational education, adult and in-service education and courses of special interest to the community? On the basis of this is determined the selection of materials and available space needed to house the facilities.

Once questions relating to the character of an individual institution are analyzed and discussed, little action can accrue without

funds. It takes money to promote the implementation of a learning resource program, and it takes even more to build one. Whenever technology is intended to penetrate an educational program, it cannot justifiably do so in strenously economic times. Since the Second World War the country has been economically progressive and educational funding has been a priority for national expenditures. Without this consideration, the initiation and maintenance of learning resource programs would be seriously impaired.

Leaders in the field are learning about alternatives in the face of present economic cutbacks. The 1973 "Guidelines" suggest that inter-agency cooperative activities be designed to ease budget burdens. "Through consortia, media cooperatives, and loan arrangements institutions can share resources...By cooperative planning most expense and wasteful duplication can be avoided in the community and the region." (63:n.pag.) The "Guidelines" advise that administration be alert to cooperative activities and be willing to explore the possibilities of participation among institutions.

It is still widely held that a great deal of guesswork goes into educational technology, and it should be accepted that there will always be new kinds of technology. This can become frustrating if a learning resource program tries to remain fastidiously up-to-date. If a college has recently installed a new computer system, should it be

abandoned for the sake of an even newer dial access system, today's ultimate in individualized instruction? An administrator may have difficulty in facing the options; as an ethical consideration, does newer technology always insure better instruction and learning? As an economical consideration, is it rash to discard one system for another, or is it "old school" to hold onto the original?

In the face of this type of conflict, where does an administrator turn? Invariably as a decision-maker in a position of responsibility, he must turn to himself and take personal toll for his actions. Before this, however, he should not hesitate to promote dialogue among himself and members of the staff, to correspond with others in his position at other colleges, possibly to attend conferences discussing change and innovation in two-year colleges, and to read as much of the available literature on the subject as possible. In gaining practical experience, it would benefit an administrator to visit other institutions in various stages of advancement for the purpose of gathering ideas on spatial arrangements, where the faculty offices, seminar and classrooms, lounging and conference areas, production facilities, storage centers, learning laboratories, projection rooms and special educational facility rooms are designed with the student and staff in mind. An administrator reviews and assimilates information before deciding what is best for the members of his educational community, in light of instructional advancements and what a changing society will expect of its educated members.

SOURCES

and

ANNOTATED BIBLIOGRAPHY

Published Texts:

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3. Branscomb, Harvie. Teaching With Books. Hamden, Connecticut: The Shoe String Press, Inc., 1964.

Presents the major outcome for a library project with the Association of American Colleges through a grant from the Carnegie Corporation to Dr. Harvie Branscomb. The primary goal, effectively prepared and accomplished, is the consideration of the college library and the extent these libraries are integrated into their institution. Of special importance is its educational effectiveness in developing all those aspects of the general and reserve book collection. Provided also are implementations and circulation statistics of a number of college libraries.

4. Brown, James W. and Thornton, James W. Jr., eds. New Media in Higher Education. Washington, D.C.: Association for Higher Education and the Division of Audiovisual Instructional Service of the NEA, 1963.

This volume was published with the rationale of providing new media resources available for Higher Education. The trend for using new kinds of media for instructional support is encouraged by the current influence of increased enrollments, costs, classroom facilities and need for improving college teaching. The contents of the text involve the problems of such media, the aims, its use and the actual administration in higher education. In summary, the various contributions of new media, along with its potential for change are explored and speculated.

5. Green, C. Alan, ed. Educational Facilities With New Media. Troy, New York: Renssilaer Polytechnic Institute, 1966.

Written as a result of a two-year architectural research study that was supported by the U.S. Office of Education. The publication had one objective: "to optimize the conditions for learning by providing physical environments most conducive to learning when media are employed in the educational process." In meeting the aims, studies, designs and implementations are collected and offered for efficient education. The three areas reported on, involve policies for learning media, facilities for media, their designs with technical guides as projections.

6. Hostrop, Richard W. Teaching and the Community College Library. Hamden, Connecticut: The Shoe String Press, Inc., 1968.

Shows how the public community college has grown in greater influence to provide expenditure of large sums of money for provision of library, equipment and material services, used for the major purpose of "furtherance of learning." The areas of library materials and the relationship of instruction to the library is covered in great depth and helps to clearly indicate the importance of such areas.

7. Johnson, B. Lamar. Islands of Innovation Expanding: Changes in the Community College. Beverly Hills, California: Glencoe Press, 1969.

Findings of a survey with 77 junior colleges in 22 states are given with the purpose of encouraging change, innovation and improvements over present situations by way of projections and recommendations. Expressed are guidelines and suggestions that have emerged for two-year colleges, along with innovative happenings presently being developed. Discusses aids and obstacles to such change. The last section is devoted to trends and projections giving many developments in education that are particularly relevant to the junior college program.

8. Johnson, B. Lamar, and Lindstrom, Eloise, eds. The Librarian and the Teacher in General Education: A Report of Library-Instructional Activities at Stephens College. Chicago: American Library Association, 1948.

Shows how Stephens College has worked on its library to make it an integral part of its instructional program. The publication was originally planned by librarians, but in its actual writing, had contributions from faculty colleagues. The areas covered by Stephens College are involvement with its libraries, how librarians and teachers are sharing roles, and use of the library with implications of good practices for other schools and colleges to follow.

9. Johnson, B. Lamar. Vitalizing A College Library. Chicago: American Library Association, 1939.

Written to inform librarians and other educators the philosophy, practices and implications of Stephens College's library program, and how it contributed effectively to the total college program. Many of these same concepts are still being investigated today. A landmark publication in the field.

10. Licklider, J.C.R. Libraries for the Future. Cambridge, Massachusetts: The Massachusetts Institute of Technology, 1965.

Report on the research developed and recorded on libraries of the future. Its direct application shows an inquiry into newer techniques for handling operations connected with information assembling in recorded form to immediate availability for use. The study was sponsored by the Council on Library Resources, Inc., and was conducted by Bolt Beranek and Newman, Inc., between November 1961 and November 1963. Of special importance offered in the text is the discussion and review of the potentialities and limitations of computers in libraries in future applications for transmission of knowledge.

11. Moore, Everett Leroy, ed. Junior College Libraries: Development, Needs and Perspectives. ACRL Monograph No. 30. Chicago: American Library Association, 1969.

A text compiling the many papers presented by program participants at a conference on Junior College Libraries at UCLA in June, 1967. The conference was sponsored by the American Library Association and the American Association of Junior Colleges. The conference enabled participants the opportunity to analyze the roles of the junior college libraries, research and personnel, facilities and information retrieval, so that effective and specific changes may occur.

12. Pearson, Neville P., and Butler, Lucius A., eds., Instructional Materials Centers. Minneapolis, Minnesota: Burgess Publishing Company, 1969.

A selection of 31 readings in the instructional materials center, from the elementary level through to the university. The articles give a useful understanding to librarians, administrators, audiovisual people and others seeking information on types of materials related to such a center. Besides covering the different levels of education that IMC is involved in, the philosophy, operation, personnel and final evaluation of such centers, are also covered in sufficient depth.

13. Pearson, Neville P. and Butler, Lucius A., eds. Learning Resource Centers, Selected Readings. Minneapolis, Minnesota: Burgess Publishing Company, 1973.

In this collection of readings, ideas recognizing the field of "educational communications" resulting in more learning and better understanding of resources, provide the base and breadth for a well-performed learning resource program. The centers reviewed present concepts and theories involved on all levels of learning. Final application are given in the special areas of science, vocational, technical and supplementary educational services for the independent learner.

14. Research and Policy Committee of the Committee for Economic Development. Innovation in Education: New Directions for the American School. A statement on national policy by the Committee. New York, July, 1968.

In preparing the above statement, the Subcommittee on Efficiency and Innovation in Education relied heavily on a number of scholarly papers submitted from the field in order to give an accurate account of the many problems, opportunities, goals, costs, and benefits in American schools. With these in mind, a definite proposal for a Commission on Research, Innovation and Evaluation in Education was achieved.

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This is written in an effort to analyze curriculum planning processes with all of its elements, determinants, principles and procedures. The book gives theoretical bases for curriculum decisions, with fundamental factors, aims and functions defined. The five parts covered entail the process, determinants, bases, organization and procedures for curriculum planning and instruction.

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"When a college is a library and a library is a college it is a library-college." This concept is thoroughly explained and reviewed by Shores, who speaks of book selection as "printed" material, audiovisual as "non-book" materials, and the sum total of man's communication possibilities as the "Generic Book" collection. The "Generic Book: includes such formats as tapes, radio transparencies and films. The reason for this integration is to help in meeting individual differences in students through the variety of format, levels and subject coverage, as mediums of communication for learning.

18. Tickton, Sidney G. To Improve Learning. New York: R.R. Bowker Company, 1970.

A publication by the Commission of Instructional Technology that grew out of Title III of the Public Broadcasting Act. It reviews all the methods of communication in instructional technology. Of special interest are the selected working papers by many specialists, given as the State of the Art on Instructional Technology: patterns for development, explanations, adaptations and distributions of the various materials for educational use.

19. Trinker, Charles L. ed. Library Services for Junior Colleges. Northport, Alabama: The American Southern Publishing Company, 1964.

The first major publication involved with the junior college library organization, administrative practices and its educational development. This is approached through administration, faculty, and staff. New concepts and designs are given for the junior college library with the dominant theme being the library as a teaching instrument: individual services and operations prepared in light of individual institutions and their academic programs.

20. Unwin, Derick, ed. Media and Methods Instructional Technology in Higher Education, London: McGraw-Hill, 1969.

Describes various media and technological assistances that college instructors may consider for establishing skillful teaching. Each contributor in the text draws on first-hand experience in dealing with his topic by opening up new and exciting possibilities in enriching future teaching and presentations.

21. Voight, Melvin J. ed. Advances in Librarianship. New York: Seminar Press, 1972.

Pays particular attention to various problems and challenges in community college libraries, showing changes and foresight of educators and librarians at the two-year college level. Harriet Genung and James O. Wallace, noted leaders in the community college librarianship, give their viewpoints. The areas of major interest covered are the developments along with the milestones in today's libraries, current problems and future libraries.

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A text that describes and outlines the ways for two-year college libraries to serve their institutions. Specific recommendations are made along with analyses of practices and programs. A questionnaire was administered with specific criteria and illustrative measures, used as direct guidelines for the study. Librarians were asked to describe various techniques, solutions and possible changes they considered and observed to be useful to the two-year college movement. Finally, this report gives a comprehensive picture of the community college library programs in the early sixties.

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Manuscript developed on the writings of four authors; on the different aspects of innovation in higher education, with coverage of past, present and future innovations in institutions of higher education. The particular aspects of innovation covered entail writings that will be valuable to all educators who are trying to develop some possibilities concerning change for improvement in higher learning. Included is an annotated bibliography.

24. Blocker, Clyde E. Personnel Needs of Two-Year College Libraries. A paper presented at the Conference on Library Services to vocational-technical education programs in Junior Colleges. St. Louis, Missouri: American Association of Junior Colleges and the American Library Association, June, 1968.

The needs of two-year college librarians are directly connected in this article to their students, faculty and counselors. Cooperation and direct service are developed throughout the

presentation with roles of the library personnel classified into three major segments: (1) technical activities with its necessary acquisition, storage, retrieval and use, (2) administration, (3) professional services and the activities that support programs.

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Examines the systems approach to the learning resources center and how this relates to the needs of the failure-oriented junior college student. Special attention is given to motivation, instructional support and design, guidance and skills needed for development by the student working towards positive attitudes in learning. The actual components of the learning resources center are overviewed into a unified system that may serve individual student goals at a rate directly related to his personal ability.

26. The Carnegie Commission on Higher Education. The Fourth Revolution. New York: McGraw-Hill Book Company, June, 1972.

A report identifing the various revolutions in education over the past decades and possible uses of technology with its penetrations and directions. The libraries and information revolution section is very well presented, covering major topics, such as learning centers, computer and other networks for communications and informations. Also, impacts on faculty and students are looked at; costs and various goals of technology in relation to effective instruction and media are suggested.

27. The Carnegie Commission on Higher Education. The Open-Door Colleges. Highstown, New Jersey: McGraw-Hill Book Company, 1970.

This third report by the Commission discussed the role of the two-year community college and proposes policies, based on future developments and current needs and practices. The following major themes are constant throughout the report and involve the community colleges' worth: comprehensiveness; role of the two-year institutions; provisions for transfer; support and status of occupational programs; supporting and assuring equality of educational opportunity for all Americans; tuition; cultural life; optimum size of community colleges; local governing and advisory boards, financing by state and federal governments.

28. The Design Workshop. Education and Architecture in the 20th Century. Toronto, Ontario: Colleges of Applied Arts and Technology, November, 1971.

A documented report containing various speeches by workshop participants on the planning of learning resource centers, its facilities and possibilities for the future. The centers were directly related to functions of libraries--past, present and future--providing data, information, ideas and perceptions on the educational institutions' learning needs.

29. Ducote, Richard. The Learning Resources Center: Concepts and Designs. Paper presented at the meetings, "The Learning Resource Center of the Two-Year College." Boone, North Carolina: Appalachian State University, June-July, 1970.

The document gives a good representation of learning resources concepts for the junior-community college. The areas covered entail concepts, designs and patterns. A new approach to education will and have created ideas that bring new media of hardware and software into the developmental process of individual learning.

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This report clarifies how the learning resource center meets the special needs of the two-year college student, by supplying the materials, facilities and interrelatedness suited for teaching/learning activities. An analysis of the article provides that, although learning may be limited in its scope, leaders may still provide patterns that organize and challenge the student toward his personal needs.

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This study was generally prepared for administration, faculty, and technical media specialists. Explains the advantages of working with innovations within the media center. Active association of the media coordinator with the faculty is strongly suggested.

32. Johnson, B. Lamar, ed. The Junior College Library. A report from UCLA Junior College Leadership Program. Los Angeles: UCLA, School of Education, January, 1966.

The junior college library has the responsibility and opportunity to differentiate itself from other educational institutions, and the reasons are clearly defined in this report. Organization and development of this opportunity have been cooperatively established through the American Library Association and the American Association of Junior Colleges. Acting upon this, a National Conference on Junior College Libraries was planned and attended by more than two hundred participants; reviewed in this report. Features of the report are descriptions on new learning resource centers; standards and accreditations for junior college libraries and possible advice and insights for strengthening libraries in action in two- and four-year institutions.

33. Jordan, Robert T., et.al. Impact of the Academic Library On the Educational Program. New Dimensions in Higher Education, Report No. 29, ed. by Everett H. Hopkins, HEW, Office of Education, Washington, D.C., 1967.

This manuscript attempts to show the impact college libraries have on their respective campuses. The role of the library is looked at along with possible developments, trends, functions and uses of technological innovations in relationship to the academic programs. The highlights are the changing roles of librarians and teachers, the cooperative relationships in meeting individual student needs, and making the nature of the library the center for the entire educational program. An annotated bibliography helps to furnish further research on the academic library.

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Report of specification for existing library, and expansion of its facilities. Preliminary consideration was given to faculty, students and methods of instruction so that patterns of education will meet the required needs of students. Subcommittees were given specific areas to review and report on so that the reader may learn how services are developed and provided for.

35. McGuffey, C.W. Educational Specifications for the South Campus of Seattle Community College. One of three papers presented to Seattle Community College in development of their educational facilities. Tallahassee, Florida: Associated Consultants in Education, October, 1966.

A detailed description of facilities to be considered in planning and developing the campus. Special descriptions are given of the instructional center and its resources, that assure production, utilization and coordination.

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A collection covering many aspects of the library learning resource center. The areas looked at involve innovation, teaching functions, stimulation of faculty in use of facilities, how information is to be handled and finally, the area of instruction with all its considerations.

37. Ontario Department of Education. The College Resource Centre, Colleges of Applied Arts and Technology. Toronto: School Planning and Building Research Section, September, 1971.

This report provides simplified guidelines for planning resource centers for colleges of applied arts and technology. The sections covered include philosophies, descriptions and illustrations of resource centers, and of special importance, are the planning determinants discussed for centralized v. decentralized organization.

38. William Rainey Harper College. Learning Resources Center Staff. Appendix, Faculty and Staff Guide to the Learning Resources Center. Palatine, Illinois: The College, 1971.

This documented report provides a complete guide to services and job analysis; also task functions involved with the utilization of the learning resource center at Harper Rainey are given.

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39. Bisdorf, Donald L. and Terwilliger, Gloria. "A Team Approach to Campus Planning" American School and University. vol.44, November, 1971. pp. 38-42.

Explains the emphasis and development of the Eastern campus of Northern Virginia Community College. The designs and concepts were guided entirely by the goals of the college and the cooperation of internal personnel and external expertise in producing and educational system that is designed to meet their needs of innovation and individualized instruction. The center will provide alternative paths for learning, according to independent knowledge and skills.

40. Bock, D. Joleen. "Community Colleges: Much More" Audiovisual Instruction. vol. 18, March, 1973. pp. 91.

This article is a follow-up on the 1972 Guidelines for Two-Year College Learning Resource Programs in relation to the actual programs being implemented. The picture given is that two-year colleges' new learning resource programs are diversified for individualized learning.

41. Burns, Judith. "The Joint Standards: Media or Mediocrity?" Educational Technology. vol. II, September, 1971. pp. 53-56.

Presents a brief discussion of the Standards for School Media Programs in 1969. The knowledge of such controversial statements, shaping our educational system in the future, are not only enlightening, but supportive of types of programs needed for social change, educational development and technological innovation.

42. Cochran, Lee W. "In the Beginning...It was DVI" Audiovisual Instruction. vol. 18, March, 1973. pp. 42-43.

Shows the development of the Department of Visual Instruction of the NEA in 1923 to the Department of Audiovisual Instruction in 1947 to finally the Association for Educational Communications and Technology. The results bering to light 50 years of development and research in instructional media support.

43. Connolly, John J. and Sepe, Thomas D. "Individualized Instruction: Are Students Ready?" Community and Junior College Journal. vol. 43, March, 1973, pp. 30-31.

Summarizes the desires of most students to achieve success, but at the same time, efforts to innovate this achievement (such as individualized instruction) has many times ignored a vital ingredient of the proper learning environment. Students who have barely survived earlier learnings, often need more personalized attention. They require not only different materials and techniques, but also different types of instructors and environments for group and individual learning.

44. Douglas, Jeanne Masson. "Media/Library Integration In Practice" Audiovisual Instruction. vol. 18, March, 1973. p. 81, 84.

A description of Reading Area Community College and organization of its resource center, with full descriptions of the facilities and services. Its success seems to be based on its organization, supporting the institutions diverse needs and objectives.

45. Ely, Donald P. "Defining the Field of Educational Technology" Audiovisual Instruction. vol. 18, March, 1973. pp. 52-53.

The definitions of educational technology are adequately reviewed in this article with interpretation of these terms, attributable to the background of the individual stating the definition.

46. Forrester, Thomas C. and Zakia, Richard D. "Evaluation of Televised Instruction" Audiovisual Instruction. vol. 17, December, 1972. pp. 14-15.

The authors of this article wrote it specifically to provide some positive opinions and suggestions for improvement in televised instruction. The information was obtained from a 30-item student opinionnaire that includes the following areas: instructors' modes of presentation; student/instructor dialogue; subject matter; courses, as a whole; and additional comments.

47. Fusaro, Janice F. "Toward Library-College Media Centers: A Proposal for the Nation's Community Colleges" Junior College Journal. vol. 40, April, 1970. pp. 40-41.

Increasingly, the two-year colleges are determining their libraries as learning resources centers; and with the explosition of information and nonprint technologies available, it is fast becoming an accepted concept. Independent learning can be expanded and challenged with this new development. Progress in administration, curriculum and instruction is easily foreseen.

48. Gleazer, Edmund J. "The Stake of the Junior College In Its Library" College and Research Libraries. vol. 27, July, 1966. pp. 263-66.

The major identity of the two-year college is its involvement as an educational resource center for the community, through its libraries. The faculty and student body are encouraged to support this service. However, the attentions given to these libraries in the past have been less affirmative, and now, certain needs must be agreed upon. In light of this, a conference was held in May, 1965, inviting representatives from the ALA and AAJC. They gathered and discussed proposals that may challenge and encourage such services.

49. Harvey, John F. "The Role of the Junior College Library" College and Research Libraries. vol. 27, May, 1966. pp. 227-32.

Reviews junior college goals and how the library, as the center of the campus, may provide for these goals. The ideas suggest the teachings of Branscomb and Johnson, whereby libraries are encouraged to be student laboratories, The state of junior college librarianship is also interpreted.

50. Hirsch, Felix E. "New Horizons for Junior College Libraries" Library Journal. vol. 85, June, 1960. pp. 2372-375.

This publication provides a blueprint of the 1960's ACRL Standards for College Libraries, giving a carefully reasoned documentation of what is vital for progress in American higher education. It is not assumed that the standards will please everyone, but does give support to what the well-functioned junior college library should accomodate.

51. Hitchens, Howard, Editorial. Audiovisual Instruction. vol. 18, March, 1973. pp. 128.

Deals with the concern of logistical support of instruction and the possibility of a merger of close ties of the AECT with the AASL and ACRL. The three areas covered in this effort are media management, design and production of instructional media and systems planning and design.

52. Jarecke, Robert F. "The Evaluation of Media Programs in California" Audiovisual Instruction. vol. 17, December, 1972. pp. 9-11.

In this article, a review of an instrument devised to evaluate A-V programs in the state of California, is described. Given are the background, needs, operation, qualitative measures, and results. The outcome of the program showed that the teams involved began working together in a coordinated effort in order to prepare and experience a well-founded media program.

53. Nader, Shafcek. "Cable TV and the Community College" Community and Junior College Journal. vol. 43, November, 1972. pp. 8-9.

A review of the possibilities of cable TV for community colleges with pointers on planning for optimum use, along with predictions of its value as a prime resource. A bibliography is provided for further reading.

54. Peterson, Gary T. "Conceptualizing the Learning Center" Audiovisual Instruction. vol. 18, March, 1973, pp. 67-72.

Emphasizes resources in the learning center by placing less importance on line-staff positions. The premise for a learning resource is found in its components and basic functions, supply-support, production, instruction, consultation and administration. As a catalyst, the center presents possibilities for change in meeting individual needs of both students and faculty.

55. Shores, Louis. "The Library College Idea" Library Journal. vol. 16, September, 1966. pp. 3871-875.

The outcome of independent study movements is easily gathered through the workings of the library-college. Thus, the classroom is less the center for learning and the college-library is becoming more vital as a fundamental resource in meeting and relating to individual needs.

56. Veihman, Robert A. "Some Thoughts On Intershelving" Audiovisual Instruction. vol. 18, March, 1973. pp. 67-72.

Reinforces a firm conviction of the author that intershelving does work if given a chance and if fears of items being stolen or damaged are erased. The collection at the College of DuPage opened in 1967 and is adequately explained as a place that makes available to all students all types of materials through the use of open shelves. All materials are treated equally, with non-book materials not confined to the perusal of a few searchers.

57. Wallace, James O. "Two-Year College Library Standards" Library Trends. vol. 21, October, 1972. pp. 219-31.

The two-year college is distinct in being a major contributor to American Higher Education. A review of standards advocated over the last fifty years, gives a good indication of the improvements

these colleges have made. The final guidelines are not only indicative of three associations working together, but also give implications that other changes and revisions will take place.

58. Watson, Norman E. and Luskin, Bernard J. "Cables, Cassettes, and Computers at Coast" Community and Junior College Journal. vol. 43, November, 1972. pp. 12-13.

A wide segment of the population is given a chance to attend college through the emerging medium of television. The local communities are offered an opportunity to attend classes by communiversity ("university" and "community" combined). Therefore, the opportunity for people to continue educating themselves is available in a way re-designed to meet personal needs.

59. Weisgerber, Robert A. "Individualized Learning Through Technology" Audiovisual Instruction. vol. 18, March, 1973. pp. 54-55.

A review of new technological improvements in individualized instruction over group-oriented instruction. Such a program is valuable, and approaches to its achievement are explained in this article. The areas covered involve characteristics and implementations of new programs and the role of media specialists in pioneering and innovating the various areas of the individualization process.

60. Zalatime, Suleiman D. "Media Preparation Services in Higher Education" Audiovisual Instruction. vol. 17, December, 1972. pp. 26-31.

A major review of how media in colleges and universities fall short of satisfying needs and support for individual programs. However, it does point out the recent trends for such material and facilities. Provisions for enhancing faculty and student relationships are mentioned, as institutions meet more self-service facilities, in response to the demands.

Miscellaneous:

61. American Association of Junior Colleges, Association of College and Research Libraries. "AAJC-ACRL Guidelines for Two-Year College Library Learning Resource Centers" n.d.(Mimeographed).

Given here is an earlier draft of the 1973 Guidelines for Two-Year College Learning Resource Programs. Additional areas covered in this publication include: guidelines for staffing, teaching responsibilities of librarians, formulas for staffing, collection of selected materials, audiovisual services and space utilizations.

62. American Association of University Professors.. "Faculty Status for Academic Librarians" Academe. vol. III, Washington: The Association, March-April, 1973.

This article gives the recognized status of college librarians in their required roles of making resources available to the academic community. A statement was rendered, with the tripartite approval of the AAUP, the ACRL and the Association of American Colleges.

63. American Library Association, American Association of Community and Junior Colleges, Association for Educational Communications and Technology. Guidelines for Two-Year College Learning Resource Programs. Washington: AECT, January, 1973.

The latest guidelines for two-year colleges that are including learning resource programs in their operations. They are to serve only as general foundations in organization, and in operations and services. The areas developing cover: roles, objectives and purposes, organization and administration, budget, instructional systems, services and cooperative arrangements to be shared and coordinated with other institutions.

64. American Library Association and National Education Association. Standards for School Media Programs. Chicago: ALA, Washington: NEA, 1969.

Gives standards for media programs to follow in strengthening present programs or when implementing new services and resources. In this publication, media referred to printed and audiovisual forms of communication that will accompany technology. The standards given, help describe services that are used in school programs and note guidelines for staff, resources and facilities found in such centers.

65. Henderson, Diane D. Report on Alternatives and Considerations for the Design of a Learning Resource Center (LRC) at Georgetown University. Washington: The Mitre Corporation, April, 1972.

This working paper, unique in its own way, provides information and insights on all the elements, present and future, found in learning resource centers. Various designs and concepts are explored, with supporting illustrations and suggestions for equipping and allocating space.

66. Henderson, Diane D.; Melloni, Biagio John; Sherman, J. Gilmour. What A Learning Research Center (LRC) Could Mean for Georgetown University. No. M71-62. Washington: The Mitre Corporation, October, 1971.

This is a preliminary outline of the problems, approaches and tasks to be completed before the activities of a LRC may be undertaken and supported at Georgetown.

67. New York Times. April 8, 1973, pp. 1 and 6.

Article outlining some thoughts on the new technology presented in Mr. Drucker's forthcoming book, Management; Tasks; Responsibilities; Practices.

68. Umberger, Dandra Lynn. Audiovisual Materials in the Junior College Library Instructional Materials Center. A research paper for the master of science in library science degree. Chapel Hill, North Carolina: University of North Carolina, October, 1967.

This research paper describes the junior college library instructional materials center, with major emphasis on its unique problems, materials and facilities in meeting and providing the educational services for such an institution.

69. Washburn, Barbara Pfhol. "The Learning Resources Center in an Institution Dedicated to Student Learning: A Proposal for the Two-Year College" Unpublished Ed.D. dissertation, Department of Education, Duke University, 1971.

The proposed problem in this dissertation centers around coordinating instructional products for learning resource centers, with particular emphasis on the systematic activities and individualized approaches needed in product development. Several product developments are outlined with specific references given to the process of instructional improvement rather than on methodology. Special emphasis is placed on continuous revisions of materials, creating a cycle for the constant review of accountability in meeting individual needs.

70. Winstead, Philip C., et.al. The Educational Development Officer --A Catalyst for Change in Higher Education. Durham: Regional Educational Laboratory for the Carolinas and Virginia, May, 1969.

In this working paper a remindful look is given on how institutions need to constantly keep abreast of changing demands. The person who proposes to approach and meet tasks is the EDO; such an individual is intended to work with administration and faculty, making decisions that will assist educational development and change. The areas covered include the EDO's responsibilities, position within the organization, knowledge and skills, profile, operational style, and environment needed, in which to perform adequately. The EDO is regarded as a "coordinator, researcher, and future watcher."

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